

WHAT IS CLAIMED IS:

1. A feed roller for handling trees, the feed roller comprising:
a rotatable support member;
a plurality of elongated strips coupled to the support member
and extending substantially parallel to one another in a cylindrical
configuration, each of the strips having a leading edge having a
plurality of spaced apart projections interdigitating with projections
on a trailing edge of an adjacent one of the strips.
2. A feed roller according to claim 1 comprising a textured surface on
an outer face of each of the strips.
3. A feed roller for tree handling, the feed roller comprising:
a drum having a longitudinal axis and a substantially
cylindrical surface;
a plurality of strips spaced apart around a circumference of
the drum, the strips extending substantially parallel to the
longitudinal axis, each strip having a leading edge and a trailing
edge, each strip having projections on its leading and trailing edges,
the projections on the leading edge of each strip interdigitating with
projections on a trailing edge of an adjacent strip; and,
each strip having a first end extending into a first pocket at a
first end of the surface and a second end extending into a second
pocket at a second end of the surface.
4. A feed roller according to claim 3 wherein each of the strips has an
inward-facing portion, which bears against the drum, and an
outward-facing portion and the inward facing portion is narrower
than the outward facing portion.

5. A feed roller according to claim 4 wherein the inward facing portion comprises a band of material mounted to the strip.
- 5 6. A feed roller according to claim 5 wherein the band of material comprises a resilient material.
7. A feed roller according to claim 5 wherein the band of material comprises a material having a low static coefficient of friction with the surface of the drum.
- 10 8. A feed roller according to claim 7 wherein the material has a static coefficient of friction with a material of the surface of the drum which does not exceed 1.
- 15 9. A feed roller according to claim 8 wherein the static coefficient of friction does not exceed 4×10^{-1} .
10. A feed roller according to claim 5 wherein the band of material is retained in a longitudinal channel in the strip.
- 20 11. A feed roller according to claim 5 wherein the band of material comprises a nylon material.
12. The feed roll according to claim 3 wherein the surface comprises a layer of resilient material bonded to the drum.
- 25 13. A feed roll according to claim 3 wherein the leading and trailing edges of each strip have a wavy shape.
- 30 14. A feed roll according to claim 3 wherein the strips comprise steel strips.

15. A feed roll according to claim 12 wherein the strips comprise quenched tempered steel.
- 5 16. A feed roller according to claim 3 wherein the first pockets are defined at least in part by a retaining member comprising a plurality of circumferentially extending segments.
- 10 17. A feed roller according to claim 16 wherein each of the segments defines a plurality of the first pockets.
- 15 18. A feed roller according to claim 17 wherein each of the pockets comprises a leading abutment surface and a trailing abutment surface and the leading and trailing abutment surfaces are provided by surfaces of the segments.
- 20 19. A feed roller according to claim 3 wherein each of the pockets comprises a leading abutment surface and a trailing abutment surface and the leading and trailing abutment surfaces are provided by surfaces of the drum.
- 25 20. A feed roller according to claim 3 wherein outer surfaces of each of the strips comprise first and second abutment surfaces which limit longitudinal movement of the strips by abutting respectively against surfaces adjacent to the first and second pockets.
- 30 21. A feed roller according to claim 3 wherein outer faces of the strips comprise textured surfaces.
22. A feed roller for tree handling, the feed roller comprising:
a substantially cylindrical drum having a longitudinal axis;

a plurality of metal strips spaced apart around a circumference of the drum, the strips extending substantially parallel to the longitudinal axis, each metal strip having a leading edge and a trailing edge, the leading edge shaped to provide projections, and the trailing edge having a shape complimentary to the shape of the leading edge of an adjacent one of the strips, the projections on the leading edge of each metal strip interdigitating with projections on a trailing edge of an adjacent one of the metal strips;

wherein the strips are coupled to the drum by a coupling permitting the strips to rock from side to side.

23. A feed roller according to claim 22 wherein outer surfaces of each of the strips comprise abutment surfaces which limit longitudinal movement of the strips by abutting against parts fixed to the drum.

24. A feed roller according to claim 23 comprising a layer of resilient material between each of the metal strips and to the drum.

25. A feed roller according to claim 24 wherein the resilient material has a hardness of less than 80 on the Shore scale.

26. A feed roller according to claim 22 comprising a layer of resilient material bonded to each of the strips.

27. A feed roller according to claim 22 comprising a layer of a slippery material mounted to each of the strips and bearing against a surface of the drum the slippery material having a static coefficient of friction with a material of the drum not exceeding 1.

28. A replacement tree gripping member for a feed roll for tree handling, the tree gripping member comprising:

a strip of metal having a textured outer face,
an inner face bearing a band of a material which is resilient,
has a static coefficient of friction with steel not exceeding 1, or is
both resilient and has a static coefficient of friction with steel not
exceeding 1,

a wavy leading edge comprising a plurality of projections,
and

a wavy trailing edge comprising a plurality of projections
complementary to the leading edge projections wherein the band of
material is narrower than the strip.

29. A replacement tree gripping member according to claim 28 wherein
the outer face comprises abutment surfaces adjacent to each of first
and second ends of the member.

30. A replacement tree gripping member according to claim 29 wherein
the outer face is textured by a pattern of flattened pyramidal
protrusions.